

# UCP1 Rabbit mAb

Catalog No.: A21979

Recombinant

4 Publications

## Basic Information

**Observed MW**

33kDa

**Calculated MW**

33kDa

**Category**

Primary antibody

**Applications**

WB, IF/ICC, IHC-P, ELISA

**Cross-Reactivity**

Mouse, Rat

**CloneNo number**

ARC54141

## Background

Mitochondrial uncoupling proteins (UCP) are members of the family of mitochondrial anion carrier proteins (MACP). UCPs separate oxidative phosphorylation from ATP synthesis with energy dissipated as heat, also referred to as the mitochondrial proton leak. UCPs facilitate the transfer of anions from the inner to the outer mitochondrial membrane and the return transfer of protons from the outer to the inner mitochondrial membrane. They also reduce the mitochondrial membrane potential in mammalian cells. Tissue specificity occurs for the different UCPs and the exact methods of how UCPs transfer H<sup>+</sup>/OH<sup>-</sup> are not known. UCPs contain the three homologous protein domains of MACPs. This gene is expressed only in brown adipose tissue, a specialized tissue which functions to produce heat.

## Recommended Dilutions

**WB** 1:5000 - 1:20000**IF/ICC** 1:100 - 1:400**IHC-P** 1:200 - 1:800

**ELISA** Recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements.

## Immunogen Information

**Gene ID**

7350

**Swiss Prot**

P25874

**Immunogen**

Synthetic peptide. This information is considered to be commercially sensitive.

**Synonyms**

UCP; SLC25A7; UCP1

## Contact

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## Product Information

**Source**

Rabbit

**Isotype**

IgG

**Purification**

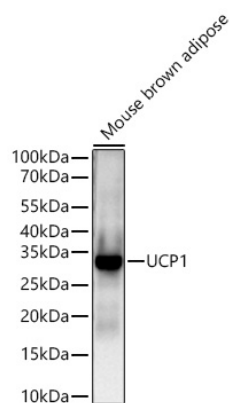
Affinity purification

**Storage**

Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS containing 50% glycerol and 0.05% BSA, preserved with proclin300 or sodium azide (as specified on the Certificate of Analysis), pH 7.3.

## Validation Data



Western blot analysis of various lysates using UCP1 Rabbit mAb (A21979) at 1:5000 dilution incubated overnight at 4°C.

Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.

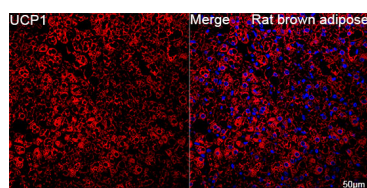
Lysates/proteins: 25 µg per lane.

Blocking buffer: 3% nonfat dry milk in TBST.

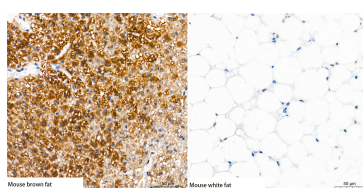
Detection: ECL Basic Kit (RM00020).

Negative control (NC): Mouse liver

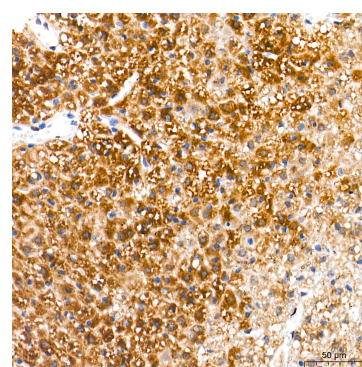
Exposure time: 20s.



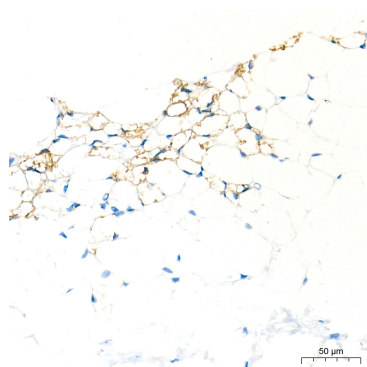
Confocal imaging of paraffin-embedded Rat brown adipose tissue using UCP1 Rabbit mAb (A21979, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). High pressure antigen retrieval performed with 0.01M Citrate Buffer (pH 6.0) prior to IF staining. Objective: 40x.



Immunohistochemistry analysis of paraffin-embedded Mouse brown adipose and white adipose tissue using UCP1 Rabbit mAb (A21979) at a dilution of 1:400 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Mouse brown adipose tissue using UCP1 Rabbit mAb (A21979) at a dilution of 1:400 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Rat brown adipose tissue using UCP1 Rabbit mAb (A21979) at a dilution of 1:400 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.